What is claimed is:

1. A method for identifying misrouting of traffic in a telecommunications network, the method comprising:

identifying a community of interest based on call signaling data, the community of interest comprising at least one intermediate switching location connected to a first terminal switching location connected by a direct trunk to a second terminal switching location;

determining whether traffic in the community of interest passes through the at least one intermediate switching location during a predetermined time period;

determining whether the direct trunk experienced an overflow condition during the predetermined time period;

when traffic in the community of interest is determined to have passed through the at least one intermediate switching location during the predetermined time period, and the direct trunk is determined not to have experienced an overflow condition during the predetermined time period, designating an identifier associated with the traffic that passed through the at least one intermediate switching location as misrouted traffic.

2. The method for identifying misrouting of traffic according to claim 1, further comprising:

flagging the identifier associated with the misrouted traffic to redirect the misrouted traffic through the direct trunk.

3. The method for identifying misrouting of traffic according to claim 1, further comprising:

identifying a volume of the misrouted traffic; and

quantifying a load on the at least one intermediate switch attributed to the misrouted traffic based on the volume.

4. The method for identifying misrouting of traffic according to claim 1, in which the signaling data comprises out-of-band signaling data collected from the at least one intermediate switching location in the telecommunications network.

5. The method for identifying misrouting of traffic according to claim 4, in which the out-of-band signaling data comprises signaling system 7 (SS7) messages.

6. The method for identifying misrouting of traffic according to claim 1, in which the at least one intermediate switching location comprises a class four switch.

7. The method for identifying misrouting of traffic according to claim 1, in which the first and second terminal switching locations comprise class five switches.

8. The method for identifying misrouting of traffic according to claim 1, in which the identifier associated with the misrouted traffic comprises an exchange code.

9. The method for identifying misrouting of traffic according to claim 8, in which the exchange code comprises a numbering plan area (NPA)/local exchange (NXX) code.

10. A method for identifying misrouting of traffic in a community of interest of a telecommunications network, the community of interest comprising at least a tandem switch connected to a first end office switch connected by a direct trunk to a second end office switch, the method comprising:

generating a base component relating to the community of interest based on out-of-band signaling data, the base component comprising a plurality of predetermined time periods and a volume of traffic passing through the tandem switch in the community of interest during each of the plurality of predetermined time periods;

determining whether the base component indicates traffic through the tandem switch in the community of interest during at least one of the plurality of predetermined time periods;

when the tandem switch shows traffic, determining whether the direct trunk experienced an overflow condition during the corresponding at least one of the plurality of predetermined time periods; and

when the direct trunk did not experience the overflow condition during the corresponding at least one of the plurality of predetermined time periods, identifying at least one unique code associated with-the-community of interest as a misrouted code.

11. The method for identifying misrouting of calls in a community of interest according to claim 10, in which the out-of-band signaling data comprises signaling system 7 (SS7) messages.

12. The method for identifying misrouting of calls in a community of interest according to claim 10, further comprising:

identifying a volume of the traffic associated with the misrouted code; and

quantifying a load on the tandem switch attributed to the misrouted traffic.

13. The method for identifying misrouting of calls in a community of interest according to claim 10, in which the at least one unique code comprises a numbering plan area (NPA)/local exchange (NXX) code.

14. A system for identifying misrouting of traffic in a telecommunications network, the system comprising:

a data collection application device, configured to receive out-of-band signaling data from a public switched telephone network; and

an application server connected to the data collection application device, the application server identifying a community of interest in the public switched telephone network based on the out-of-band signaling data received by the data collection application device, the community of interest comprising at least one intermediate switching location connected to a first terminal switching location and

a second terminal switching location, the first terminal switching location being connected by a direct trunk to the second terminal switching location; the application server determining whether traffic in the community of interest passes through the at least one intermediate switching location during a predetermined time period and whether the direct trunk experienced an overflow condition during the predetermined time period; and

when traffic in the community of interest is determined to have passed through the at least one intermediate switching location and the direct trunk is determined not to have experienced an overflow condition during the predetermined time period, the application server designating an identifier associated with the traffic that passed through the at least one intermediate switching location as misrouted traffic.

15. The system for identifying misrouting of traffic according to claim 14, further comprising:

an application database, connected to the application server, that stores information relating to at least the community of interest, the determination of whether the traffic passed through the at least one intermediate switching location during the predetermined time period, the determination of whether the direct trunk group experienced an overflow condition during the predetermined time period, and the identifier.

16. The system for identifying misrouting of traffic according to claim 15, further comprising:

a data network connecting the application server and the application database to at least one graphical user interface and enabling analysis of the stored information.

17. The system for identifying misrouting of traffic according to claim 14, in which the identifier comprises a numbering plan area (NPA)/local exchange (NXX) code.

18. The system for identifying misrouting of traffic according to claim 14, in which the out-of-band signaling data comprises signaling system 7 (SS7).

19. A system for identifying misrouting of traffic in a community of interest of a public switched telephone network (PSTN), the community of interest comprising at least one tandem switch connected to a first end office switch connected by a direct trunk to a second end office switch, the system comprising:

a signaling system 7 (SS7) data collection device, configured to receive out-of-band signaling data from the PSTN; and

an application server connected to the data collection device, the application server identifying the community of interest and determining whether traffic in the community of interest passes through the at least one tandem switch in the community of interest during a predetermined time period, based on the out-of-band signaling data provided by the data collection device; when traffic in the community of interest is determined to have passed through the at least one tandem switch, the application server further determining whether the direct trunk experienced an overflow condition during the predetermined time period; and when the direct trunk did not experience an overflow condition during the predetermined time period, the application server designating at least one exchange code associated with the traffic that passed through the at least one tandem switch as a misrouted code;

wherein the application server, together with an associated database, is configured to provide information relating to at least the community of interest, the tandem switch and the misrouted code to at least one graphical user interface.

47

20. The system for identifying misrouting of traffic in a community of interest of a telecommunications network according to claim 19, in which the application server identifies a volume of the traffic having the misrouted code and quantifies a load on the at least one tandem switch attributed to the misrouted traffic based on the volume.

21. A computer readable medium for storing a computer program that identifies misrouting of traffic in a community of interest of a telecommunications network, the community of interest comprising at least a tandem switch connected to a first end office switch and a second end office switch, the computer readable medium comprising:

a generating source code segment that generates a base component relating to the community of interest based on out-of-band signaling data, the base component comprising a plurality of predetermined time periods and a volume of traffic passing through the tandem switch in the community of interest during each of the plurality of predetermined time periods;

a determining source code segment that determines whether the base component indicates traffic through the tandem switch in the community of interest during at least one of the plurality of predetermined time periods and, when the tandem switch shows traffic, determines whether the direct trunk experienced an overflow condition during the corresponding at least one of the plurality of predetermined time periods; and

an identifying source code segment that identifies at least one unique code associated with the community of interest as a misrouted code when the direct trunk did not experience the overflow condition during the corresponding at least one of the plurality of predetermined time periods.

48

22. The computer readable medium for storing a computer program that identifies misrouting of traffic in a community of interest according to claim 21, in which the out-of-band signaling data comprises signaling system 7 (SS7) messages.